

## REMARKS

Claims 1-8 and 11-26 remain in this application. Claims 9 and 10 have been canceled without prejudice. Claims 1-8 were included in the original patent application and claims 11-26 were added by way of supplemental amendment on January 8, 2003. In view of the foregoing amendments and remarks that follow, Applicant respectfully requests favorable consideration and timely indication of allowance.

Claims 1-4 have been rejected under 35 USC § 103(a) as being unpatentable over Feeney (U.S. 6,144,841) in view of Wang (U.S. 6,178,164). Claims 5-10 have been rejected under 35 USC § 103(a) as being unpatentable over Feeney in view of Wang and further in view of Park (U.S. 5,912,884).<sup>1</sup> These rejections are respectfully traversed.

Applicant discloses a novel and unobvious approach for regulating forward link power during soft handoff. Soft handoff is the process whereby a wireless device establishes a communications link with a new base station before breaking the existing communications link with the original base station. During soft handoff, the forward link power may be regulated by a base station controller based on feedback received by each base station from the wireless device. The feedback may be a forward link power control command embedded in the reverse link pilot signal. To ensure the reliability of the forward link power control commands as the wireless device travels away from the original base station and into the coverage region of the new base station, the power of the feedback channel to the original base station may be increased. To avoid a corresponding increase in noise, the power level of one or more other reverse link channels to the original base station may be reduced. This reduction in power should not adversely impact performance because an active communications link between the wireless device and the new base station exists.

Applicant claims the process of controlling the reverse link power of the feedback channel. More specifically, independent claims 1, 5, and 7 each recite a method or system which detects the *"quality of a signal received at a base station transceiver"*

---

<sup>1</sup> Notwithstanding the summary rejection of claims 5-10, it is clear from the supporting arguments made by the Patent Office that the rejection of claims 7-9 are not based on Park. Moreover, the Patent Office has failed to provide any arguments in support of its rejection of claim 10.

*subsystem,” instructs “the base station transceiver subsystem to improve the signal quality if the quality is below a predefined target signal quality,” instructs the wireless device to “increase a pilot channel transmit power level,” and instructs the wireless device to “decrease a power gain of other channels in relation to the pilot channel.”*

The Patent Office has rejected the claims relying primarily on Feeney. However, Feeney has nothing to do with controlling the reverse link power of a feedback channel, as claimed by Applicant. Instead, Feeney is directed to a method and system for managing forward link power by adjusting the gain of the forward link transmission as a function of the frame error rate at the wireless device. In fact, the only mention of reverse link power control is relegated to a general discussion in the background portion of the patent. There, in the background portion of the patent, a conventional reverse link closed-loop power control circuit is described with a power control command being transmitted from the base station to the wireless device based on the signal quality received at the base station.

The Patent Office takes the position that Feeney discloses the process of detecting signal quality at the base station, instructing the base station to improve the signal quality, and instructing the wireless device to decrease gain. Acknowledging that Feeney does not specifically disclose a pilot signal, the Patent Office argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Feeney to provide a pilot channel as taught by Wang. The Patent Office’s position falls short of establishing a *prima facie* case because it ignores certain limitations in the claims.

First, Wang does not teach or suggest a process wherein the base station instructs a “wireless device” to “increase a pilot channel transmit power level.” (Emphasis added). Rather, Wang teaches a process for measuring the strength of several pilot signals transmitted from different base stations and reporting those measurements back to the base station controller to facilitate handoff. The pilot signals discussed in Wang are directed to forward link pilot signals. Yet, the claims require an instruction to a wireless device to increase the power of the reverse link pilot signal. Moreover, Applicant is

unable to find any discussion whatsoever in Wang relating to an instruction to increase the pilot signal power, whether it be for a forward or reverse link transmission.<sup>2</sup>

Second, Feeney does not teach or suggest a process wherein the base station instructs the wireless device to “decrease a power gain of other channels in relation to the pilot channel!” (Emphasis added). Although the reverse link closed loop power control circuit of Feeney provides up and down power commands to the wireless device in the forward link transmission, this appears to effect the power levels of all reverse link channels equally. Referring to the text in Feeney, “[u]pon receiving this command from the base station, the mobile responds by adjusting the power by an amount of  $\pm 0.5$  dB.” In contrast, Applicant claims a process whereby the gain of other channels is decreased in relation to the pilot signal. Absent any teaching or suggestion of this limitation in the art of record, the rejections by the Patent Office cannot be sustained.

Claims 2-4, 6 and 8 are all dependent, either directly or indirectly, from one of the independent claims discussed above, and therefore, include all the limitations of those claims from which they respectively depend. Accordingly, claims 2-4, 6 and 8 are also allowable for the same reasons set forth hereinbefore, as well as the additional limitations recited. Those additional limitations will not be discussed because the Patent Office has not made a *prima facie* showing on the independent claims.

Claims 11-26 were added by way of supplemental amendment on January 8, 2003. The supplemental amendment was not considered by the Patent Office notwithstanding a filing date that predated the mailing date of the pending Office action. Applicant respectfully requests that the supplemental amendment be entered at this time and examined on the merits. A copy of the supplemental amendment is attached as Exhibit A for the convenience of the Patent Office.

---

<sup>2</sup> The Patent Office cites column 1, lines 27-33, of the Wang for describing a pilot signal that can be integrated into the teachings of Feeney. However, this section of the Wang patent discusses a mobile station in an access state with no mention of a pilot signal. Therefore, Applicant believes that this section was cited by the Patent Office in error. If the Patent Office believes that Wang teaches the process of instructing a wireless device to increase the power of the pilot signal, Applicant respectfully requests that the Patent Office specifically identify where this teaching can be found in Wang.

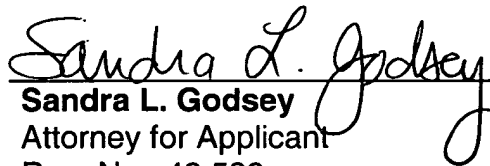
## REQUEST FOR ALLOWANCE

In view of the foregoing remarks, it is respectfully submitted that all pending claims in this application are patentable. Accordingly, reconsideration and allowance of this application are respectfully requested. Should any issues remain unsolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: May 16, 2003

By:

  
**Sandra L. Godsey**  
Attorney for Applicant  
Reg. No. 42,589

QUALCOMM Incorporated  
5775 Morehouse Drive  
San Diego, California 92121  
Telephone: (858) 651-4517  
Facsimile: (858) 658-2502